

DIVISION:	Road Services
SECTION:	Engineering Services
DISCIPLINE/TITLE:	Materials Lab Geotechnical & Special Inspection/Engineer III
POS DESCRIPTION #:	EIII-2014-008

SUMMARY: The Engineer III position acts as a Project Manager and as part of a team providing geotechnical design, construction material testing, and special inspection services in support of the Capital Improvement Program, other departments within King County and external customers.

DUTIES:

1. Supervise and maintain specific programs such as the King County WABO Certification Program (WABO).
2. Train laboratory personnel in program appropriate inspection requirements.
3. Supervise and conduct geotechnical and pavement investigations.
4. Develop and maintain the Materials Laboratory long term slide repair monitoring program.
5. Perform geotechnical field inspection and construction troubleshooting.
6. Develop scope, schedule and budget for special inspection services of occupied structures. Oversee the inspection services and provide final letter of acceptance to client.
7. Develop scope schedule and budget for geotechnical investigations, perform field data collection, geotechnical analysis and final report to clients.
8. Develop scope, schedule and budget and perform special projects such as Haul Route Studies, Pit Site Investigations and material testing and inspection power point training.
9. Perform advanced geotechnical engineering calculations for shallow and deep foundation design, retaining wall design, landslide repairs, liquefaction analysis, settlement analysis, material filter design, pavement rehabilitation, pavement design.
10. Review complex geotechnical reports for completeness and acceptance.
11. Review plans and specifications and attend coordination meetings.
12. Research and evaluate new geotechnical technologies.
13. Other duties and projects as assigned.

QUALIFICATIONS:

- Bachelor's degree in civil engineering (BSCE) or closely related field and six years (6) of experience or the equivalent combination of education and experience that demonstrates one's knowledge and experience in geotechnical and pavement engineering, material and geotechnical sampling, testing, and special inspection in reinforced concrete and shotcrete
- Advanced knowledge of geotechnical and construction materials applications
- Advanced knowledge of material testing and special inspection of concrete structures
- Advanced knowledge and skill in reading and interpreting complex structural plans for buildings
- Advanced knowledge of project management principles
- Knowledge of AASHTO Accreditation and WABO Certification programs and requirements
- Advanced knowledge of ASTM & AASHTO Standards related to sampling and testing of materials

- Advanced knowledge of geotechnical drilling equipment and proper application for various site, soil and groundwater conditions
- Advanced knowledge of geotechnical instrumentation and applications (inclinometer, LeveLogger, Blastmate, dynamic cone penetrometer, pneumatic and vibrating wire piezometer, pile driving analyzer)
- Demonstrated knowledge of specialized geotechnical engineering design software such as Driven, Shaft, APile, AllPile, MSEW, LiquefyPro, Darwin, Galena, and StablPro
- Advanced working knowledge of American Concrete Institute (ACI) Manual of Concrete Practice and International Building Code (IBC) as they relate to special inspection requirements
- Knowledge of the processes involved with soil, aggregate and concrete testing
- Demonstrated skill in sampling, testing and inspecting construction materials
- Construction record keeping and organizational skills
- Problem solving and conflict resolution skills
- Skill in using Microsoft Word, Excel, Project and Access
- Excellent verbal and written communication skills
- Demonstrated ability to apply engineering principles, methodologies and practical experience to resolve geotechnical design and construction issues
- Ability to work under tight deadlines with multiple projects and tasks
- Ability to work in a team environment
- Demonstrated predictable and reliable attendance

Necessary Requirements:

- Valid Washington State Driver's License

Special Certifications:

- Current Registration as WABO Special Inspector
- Current Registration as WABO Special Inspection Supervisor
- International Code Council (ICC) Certification as Concrete Special Inspector
- American Concrete Institute (ACI) Certification for Sampling and Testing Concrete in Field
- Shotcrete Certification

Desirable:

- Knowledge of facilities problems and repairs
- Knowledge or experience with new construction materials and testing procedures
- Experience working with engineers, contractors and suppliers
- Working knowledge of the Washington State Department of Transportation (WSDOT) Standard Specifications
- HAZMAT Training
- Professional Engineering License (PE), Civil
- Flagging and general safety training

WORKING CONDITIONS:

- Work performed in the field for extended periods of time may be performed under unfavorable weather conditions.
- Work outdoors adjacent to and with construction equipment, subjected to loud noise and vibration.
- Works outdoors, which may require walking on uneven, rocky or rough ground, or working in inclement weather.
- Required to sit, talk, listen and hear; frequently required to use hands to finger, feel or handle testing equipment, writing utensils, computer and office supplies which require repetitive arm, wrist and hand movement.
- Often required to stand and reach with arms and hands. Specific vision abilities include close, distant, color, and physical activity including but not limited to lifting up to 75 lbs at least waist height; carrying and moving objects.